Earth-Science Themes Working Group

Description: A group to share methods, data, software, and conceptual models within theme-specific applications.

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Here's a powerpoint with a recent proposal about how this group might be developed. (updated from CDI Workshop)

Membership is open to anyone. If you are interested in joining this group, please send an email to cdi@usgs.gov.

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Introduction

This Earth-Science Themes Working Group (ETWG) is an umbrella for more specific Focus Groups on earth science themes. Although up to the members of each group, collaboration may involve sharing ideas, data, and tools. Members are encouraged to leverage the expertise of other working groups within (or even beyond) the larger Community for Data Integration, building on and adapting ideas about data management and technology, for example, that are established elsewhere in order to focus on the earth science theme of interest.

While several Focus Groups within the ETWG are naturally focused a single or small set of data sets that are the de facto standard information, members are encouraged to use these groups as a community for their *earth science* theme and not just a platform for a single data product or software. There is no requirement that data sets, tools, or other artifacts be "owned" by the USGS; just that they aret are important to the Focus Group community for carrying out this kind of earth science.

Focus groups might work on a variety of issues of interest to their members. There is no requirement that a Focus Group be generic or encyclopedic in their coverage of an earth science theme. Members are encouraged to bring their own questions to the community to see if there are other interested parties interested in collaborating. Even if there are not initially, members are welcome to record aspects of their work within these wiki pages for potential future interest. A Focus group can handle more than one issue at a time, and the type of issues being addressed are free to change over time according to member interest. For instance, a Focus group may at one point deal with technical issues, such as algorithms to navigate through a river network, but then shift to quality assessment and feedback on a particular data set, such as the National Hydrography Dataset.

It is encouraged that data producers, such as the NHD team or the USDA soils geography teams, participate in the ETWG. In addition to helping users get the most out of available data sources, these members can use a Focus Group build consensus on requirements and try to bring these back to their home programs. Examples include advising about how we would like to see data available via web services and catalogs, the best value-added derivatives, feeding back to data producers about content errors or new opportunities, or developing guidance on how to use these data in our science more effectively.

The ETWG might also be used to help raise ideas and issues to higher management levels about better collaboration/partnerships with other Federal agencies on these Earth science themes. Note that although the current organization reflects individual themes, there is a *special focus group proposed for "**vertical integration**,"* meaning that it focuses on using more than one data theme towards a single purpose. This fits with the NAWQA ADIAS, as well as the NGP business case approaches to user communities.

The ETWG is really just forming and is therefore especially flexible...

Ways to Share Information

This wiki space is the primary tool through which these communities can communicate, but is by no means the only one.

includes the ability to post comments as well as to create, edit, and delete pages directly. It also includes the ability to attach files. One can, of course, also hyperlink to content that is held outside the wiki pages themselves. Members should consider using something like sciencebase.gov f or larger or more permanent data, for instance.

In addition to this we have set up a software control project in *git* using the Stash server that is part of the software suite that includes this wiki. User credentials are the same for that system as for this wiki. If you would like to set up a repository for a specific topic, please contact rviger@usgs.gov. Here are some instructions for using Git at the command line.

We also have access to an (experimental) system for proposing ideas and voting on them, called the CDI Idea Lab. Again, you will need to be a CDI member to post suggestions there, but all content is publicly viewable.

Focus Groups

The range of topics shown here are driven by the interest of members. Please feel free to suggest a new topic in this space and see if others share interest. If so, we can develop sub-pages around a candidate topic.

Fundamental Theme Focus Groups

Elevation

[not built yet]

Water

This page is a container for several foci, including hydrography and hydrologic observations (like streamflow).

As of summer 2015, there are active discussions starting between NHD-related data production teams, national modeling programs (NAWQA, StreamStats, MoWS Nat'l Hydrologic Model), and other interested parties regarding sharing algorithm ideas and example code implementations. The wiki pages below this branch will likely be actively changing as this community comes together, so please visit frequently and help shape the outcome!

Another subgroup on Subsurface Permeability (below) might also be of interest to members of the ETWG Water Focus Group (Water FG).

Soils

This topic has so far focused on SSURGO soils data from the USDA-NRCS, but does not have to be limited to this. Other data sets could be Gleeson's continental and global maps of soils permeability.

Vertical integration focus groups on Subsurface Permeability and Tile Drainage (below) might also be of interest to members of the ETWG Soils Focus Group (Soils FG).

Vegetation/Land Cover/Terrestrial Modeling

Folks have expressed an interest in discussing vegetation classification, among other topics. This could also include forecast simulations. Interested parties should modify this page accordingly/make a sub-page.

Vertical Integration Across Fundamental Themes

This is for focus groups that rely on two or more of the fundamental focus groups listed above. The current example is subsurface permeability.

Other Content (needs to be organized)

- National Geospatial Program has developed a suite of business cases based on extensive interviews with customers. Their characterizations of how users bring TNM content together could provide a great starting point for this focus.
- NAWQA, guided by Curtis Price, has begun development of what they're calling ADIAS (Ancillary Data Integration and Analysis System).

The main purpose is to centralize access to the suite of data themes needed for the NAWQA program through a web page interface. In many cases, ADIAS will house previously published data. In others, it will offer derivatives manufactured specifically engineered to meet the needs of NAWQA team members.

- It seems that this focus group could address business models and specific needs for consistency across themes (such as DEMs and NHD), but that the ADIAS vision could serve as a testbed for building a web site based on a set of catalog services for the web (CSW). It would be interesting to use this to experiment with using the ESRI Geoportal to federate data in various remote data stores, such as THREDDS servers, ArcGIS Server-published services, and ScienceBase-published services.
- A pilot project to develop CSW as described above could also serve as a way to drive discussions and development of metadata (a la Kerstin Lehnert).

Contributors

- Group members

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